REMARKS

Claims 1-17 are pending in this application.

Claim 17 has been newly added. Support for claim 17 appears throughout the specification, Examples, and claims as originally filed.

Claims 1-16 have been rejected.

The Examiner and her Supervisor are thanked for conducting an interview with the undersigned attorney on Thursday, March 6, 2008. During the interview, it was submitted that glycolide is a completely different molecule than polyglycolide, and that the term "glycolide" is art recognized and is a ***cyclic dimer*** of glycolic acid. Applicants note that the term "glycolide" is defined in the present specification at page 2, lines 31-33, as "Glycolide is a cyclic dimer of glycolic acid, containing two ester groups which upon contact with an aqueous environment are hydrolyzed, resulting in two glycolic acid molecules," and at page 5, lines 3-4, as "The glycolide of the formulation includes two glycolic acid monomers and is primarily non-acidic prior to hydrolysis." During the interview, the Examiner inquired whether glycolide alone reduces pH. The present specification describes that glycolide alone reduces pH in a menstruating vagina or in a tampon inserted therein. Please *see* the present specification at page 2, lines 31-33; page 3, lines 6-9; Figures 3, 4 and 6 which illustrate, in part, the pH lowering effect of glycolide alone; Page 4, line 27; Page 5, lines 3-4 and 25-29; and the Examples.

In view of the following, further and favorable consideration is respectfully requested.

I. At page 2 of the Official Action, claims 1-16, have been rejected under 35 USC §103(a) as being unpatentable over Kluger et al. in view of Zhao et al.

The Examiner asserts that it would have been obvious to the skilled artisan to use a combination of the teachings of Kluger et al. along with the teachings of Zhao et al. to arrive at the claimed formulation because Kluger et al. describes a formulation for reducing the pH in a menstruating vagina by inserting a tampon made from solid organic acid polymer and solid organic acid and a wetting agent, and Zhao et al. teaches a flushable tampon applicator made from biodegradable components such as lactide copolymers and glycolide polymers.

In view of the remarks herein, this rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, the PTO must satisfy three requirements. First, as the U.S. Supreme Court very recently held in *KSR International Co. v. Teleflex Inc. et al.*, Slip Opinion No. 04–1350, 550 U. S. ____ (April 30, 2007), "a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. ...it [may] be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of

what, in some sense, is already known." (*KSR*, *supra*, slip opinion at 13-15.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art references must teach or suggest all the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970).

Present claim 1 is directed to a formulation effective in reducing the pH in a menstruating vagina or in a tampon inserted therein to below pH 5.5, comprising: (a) 3-100% by weight of glycolide; (b) optionally, 97-15% by weight of a solid organic acid; and/or (c) optionally, 5-30% of a wetting agent. Glycolide is a ***cyclic dimer*** of glycolic acid, containing two ester groups which upon contact with an aqueous environment are hydrolyzed, resulting in two glycolic acid molecules (last paragraph on page 2 of the specification). Claims 2-10 and 12-15 are each directly or indirectly dependent on independent claim 1.

Present claim 11 is directed to a formulation effective in reducing the pH in a menstruating vagina or in a tampon inserted therein to below pH 5.5 comprising: (a) 3-100% by weight of glycolide; (b) optionally, 3-97% by weight of lactide; (c) optionally, 97-15% by weight of a solid organic acid; and (d) optionally, 5-30% of a wetting agent. Claim 16 is dependent on claim 11.

It is submitted that a *prima facie* case of obviousness has not been established because there is no motivation to combine Kluger et al. and Zhao et al., and because neither Kluger et al. nor Zhao et al. teach or suggest all the limitations of the claims as required by *In*

re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970). Specifically, neither Kluger et al. nor Zhao et al. teach or suggest a formulation containing the cyclic dimer, glycolide.

It is submitted that there is no motivation to combine Kluger et al. with Zhao et al. because Kluger et al. is directed to a formulation effective for reducing the pH in a menstruating vagina or in a tampon inserted therein to below pH 5.5, comprising in part, 3-80% by weight of a solid organic acid polymer, while Zhao et al. is directed to a tampon applicator comprising polyglycolide. A tampon consists of two major elements, a pledget containing the absorbent core which is inserted into the vaginal cavity to absorb menstrual fluid, and the applicator which is used to insert, i.e., guide and push the pledget into the vaginal cavity, after which the applicator is extracted and discarded several seconds after the tampon is inserted. Zhao et al. is concerned with a tampon applicator which does not remain in the vagina, has no relation to vaginal pH control and does not affect or alter the activity or properties of the tampon itself, whereas the presently claimed subject matter is concerned with a formulation for reducing the pH in a menstruating vagina or in a tampon inserted therein, as well as with a catamenial tampon comprising the formulation. Thus, Zhao et al. is not at all relevant to the field of the invention, and one of ordinary skill in the art reading Zhao et al. would not consider applying the teachings of Zhao et al. to the problem of reducing the pH in a menstruating vagina or in a tampon inserted therein. Nor would one of ordinary skill in the art consider combining Zhao et al. with Kluger et al., as they relate to two different arts, i.e. a tampon applicator (which is discarded) and a tampon, respectively.

Assuming arguendo the combination proper, neither Kluger et al. nor Zhao et al. teach or suggest all the limitations of the claims as required by *In re Wilson*.

Kluger et al. describes a formulation effective for reducing the pH in a menstruating vagina or in a tampon inserted therein to below pH 5.5, comprising in part, 3-80% by weight of a solid organic acid polymer. Kluger et al. ***does not*** teach or suggest the use of ***glycolide***. In fact, the term "glycolide" ***does not appear at all*** in Kluger et al. One of ordinary skill in the art would have no reason to use glycolide for the solid organic acid polymer based on the disclosure of Kluger et al.

Zhao et al. does not remedy the deficiencies of Kluger et al. Zhao et al. describes flushable tampon applicators that comprise a combination of high molecular weight polyethylene oxides, low molecular weight polyethylene glycols, and biodegradable polymers that include glycolide polymers, including glycolide homopolymers and glycolide copolymers; and mixtures thereof, in order to manufacture an applicator so that it will be biodegradable/flushable such that when it is discarded, it will eventually degrade and not pollute the environment. Zhao et al. ***does not*** teach or suggest the use of ***glycolide***, which, as stated above, is a ***cyclic dimmer.*** Zhao et al. does not relate at all to a pH reducing formulation.

Glycolide is a completely different molecule than polyglycolide or glycolide polymer. Glycolide has a different molecular structure and different properties than glycolide polymer. Glycolide is a small molecule, a cyclic molecule (a heterocyclic ring), while glycolide polymer is a linear polymer with a very high molecular weight. Further glycolide has a totally different

CAS number, totally different structure and molecular weight and the melting point of glycolide differs by an order of magnitude from that of glycolide polymer.

Applicants submit that the term "glycolide" is defined in the present specification as described above, and is art-recognized as described below.

The term "glycolide" is known in the art as a cyclic dimer of glycolic acid. *See* the Dictionary of Organic Compounds, 1,4-dioxane-2,5-dione; Names, Synonyms, and Structures of Organic Compounds, page 488; and SciFinder Scholar, 1,4-dioxane-2,5-dione. A copy of each of which is attached hereto. *See also* www.sigma-aldrich.com "glycolide" (printout attached hereto) and www.bio-invigor.com "GLY-S-001-1" (printout attached hereto). Further, U.S. Patent Nos. 3,457,280 and 3,435,008 (attached hereto) both describe that two molecules of glycolic acid "may condense with the elimination of two molecules of water to produce glycolide, a six-membered ring of the formula $C_4H_4O_4$...." U.S. Patent No. 5,374,743 describes at col. 1, lines 9-11, "The monomer used is lactide or glycolide which are cyclic dimmers of lactic acid or glycolic acid and which are prepared from lactic acid or glycolic acid." *See also* U.S. Patent Nos. 6,891,048 and 7,235,673 attached hereto.

In view of the foregoing, the term "glycolide" is art-recognized and means a cyclic dimer of glycolic acid.

As shown in the Examples set forth in the present specification, the use of glycolide imparts significant advantages to the presently claimed formulation which advantages are not found in the formulation of Kluger et al. For example, in the formulation of Kluger et al., the solid organic acid and the wetting agent are required components, whereas in claim 1 of the present application, they are optional components, and if present, may be used in

the alternative. This is due to the unexpectedly superior pH reducing properties of glycolide (see Figs. 4 and 6 and the description in the paragraph bridging pages 7 and 8, and the 2nd full paragraph on page 8, of the present specification).

In view of the above, it is submitted that neither Kluger et al. nor Zhao et al., taken alone or together, teach or suggest a formulation including glycolide, as presently claimed.

In view of the foregoing, it is submitted nothing in Kluger et al. and Zhao et al., taken alone or in combination, renders the presently claimed subject matter obvious within the meaning of 35 U.S.C. § 103(a). Applicants respectfully submit a *prima facie* case of obviousness has not been established. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

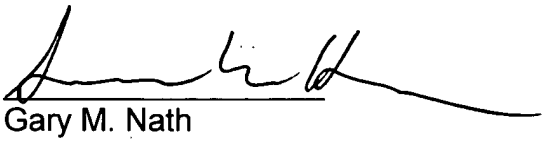
CONCLUSION

Applicants assert that the claims are in condition for immediate allowance and early notice to that effect is earnestly solicited. Should the Examiner deem that any further action by Applicants' undersigned representative is desirable and/or necessary, the Examiner is invited to telephone the undersigned at the number set forth below.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,

THE NATH LAW GROUP



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Date: March 20, 2008
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VOLUME THREE

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Crystallises in *trans*-form, equilibrates with the *cis*-form in soln.; *trans*-form predominates. Synthetic equivalent of anhydrous glyoxal. Cryst. (Me_2CO). Mp 108-110° (100°).

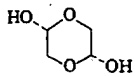
Di-Ac: [15874-26-7].
$C_8H_{12}O_6$ M 204.1 Cryst. (Et_2O). Mp 104-105°. Bp_1 105-107°. Config. unknown.

Aldrich Library of FT-IR Spectra, 1st edn., 1, 250D (*ir*)
Head, F.S.H., *J.C.S.*, 1955, 1036.
Raudnitz, H., *Chem. Ind. (London)*, 1956, 166 (*synth*)
Summerbell, R.K. *et al*, *J.A.C.S.*, 1958, 80, 604 (*synth*)
Ayras, P., *Org. Magn. Reson.*, 1978, 11, 152 (*struct, cmr*)
Venuti, M.C., *Synthesis*, 1982, 61 (*use*)

1,4-Dioxane-2,5-diol, 9CI D-0-11544

2,5-Dihydroxy-1,4-dioxane. Glycollaldehyde dimer

[23147-58-2]



(*2RS,5RS*)-*form*

$C_4H_8O_4$ M 120.1

(*2RS,5RS*)-*form*
(±)-cis-*form*

Di-Ac:
$C_8H_{12}O_6$ M 204.1 Bp_1 100°.

(*2RS,5SR*)-*form*
trans-*form*
Cryst. (Et_2O). Mp 84-85° (rapid heat), Mp 75-76°.

Di-Ac: [20688-60-2].
Mp 156-157° (161-162°).

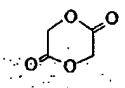
[6963-05-9]

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1, 748A (*nmr*)
Aldrich Library of FT-IR Spectra, 1st edn., 1, 478D (*ir*)
Späth, E. *et al*, *Monatsh. Chem.*, 1946, 76, 65; *CA*, 41, 2002 (*synth*)
Bassignani, L. *et al*, *Chem. Ber.*, 1979, 112, 148 (*synth*)

1,4-Dioxane-2,5-dione, 9CI D-0-11545

Glycollodilactone. Glycollide. Glycolide

[502-97-6]



$C_4H_4O_4$ M 116.0
Cryst. (EtOH). Mp 83°.

Johansson, H. *et al*, *Ber.*, 1919, 52, 745 (*synth*)
Sporzynski, A. *et al*, *Rec. Trav. Chim. (J. R. Neth. Chem. Soc.)*, 1949, 68, 613 (*synth*)
Goulden, D.S. *et al*, *Org. Mass Spectrom.*, 1969, 2, 893 (*ms*)

1,4-Dioxane-2,6-dione, 9CI D-0-11546

Diglycollic anhydride. Anhydroglycollic anhydride

[4480-83-5]

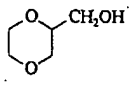
$C_4H_4O_4$ M 116.0
One of the anhydrides of Hydroxyacetic acid, H-0-01593. Cryst. (C_6H_6). Mp 97° (91-93°). Bp_{35} 140°, Bp_{12} 120°.

Aldrich Library of FT-IR Spectra, 1st edn., 1, 722A (*ir*)
Aldrich Library of NMR Spectra, 2nd edn., 1, 610B (*nmr*)
Anschutz, R., *Annalen*, 1890, 259, 190 (*synth*)
Hurd, C.D. *et al*, *J.A.C.S.*, 1939, 61, 3490 (*synth*)
Morrill, H.L. *et al*, *J.O.C.*, 1961, 26, 4103 (*synth*)
Brisse, F. *et al*, *Acta Cryst. B*, 1975, 31, 2829 (*cryst struct*)

1,4-Dioxane-2-methanol, 9CI D-0-11547

2-(Hydroxymethyl)-1,4-dioxane

[29908-11-0]



$C_5H_{10}O_3$ M 118.1

(±)-*form* [143669-41-4]
Liq. d^{20} 1.16. Bp_{18} 100-105°.

Wojtowicz, J.A. *et al*, *J.O.C.*, 1971, 36, 2232 (*synth*)
Gelas, J. *et al*, *Carbohydr. Res.*, 1974, 37, 293 (*synth, ir, pmr*)
Duclos, R.I. *et al*, *J.O.C.*, 1992, 57, 6156 (*synth, pmr*)

1,3-Dioxan-5-ol, 9CI D-0-11548

Glycerol 1,3-methylene ether. 5-Hydroxy-1,3-dioxane

[4740-78-7]

$C_4H_8O_3$ M 104.1
Sl. viscous, hygroscopic liq. d_4^{20} 1.23. Bp 191°, Bp_{11} 82°. n_D^{20} 1.4533.

Benzoyl: [49784-60-3].
$C_{11}H_{12}O_4$ M 208.2 Needles. Mp 74.6°.

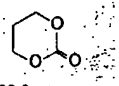
Phenylurethane: Needles (EtOH). Mp 133°.
Me ether: 5-Methoxy-1,3-dioxane
$C_5H_{10}O_3$ M 118.1 Bp 152°.

Hibbert, H. *et al*, *J.A.C.S.*, 1928, 50, 3120 (*synth*)
v. Roon, J.D., *Rec. Trav. Chim. (J. R. Neth. Chem. Soc.)*, 1929, 48, 186 (*synth, props*)
Showler, A.J. *et al*, *Chem. Rev.*, 1967, 67, 427 (*derivs, use*)

1,3-Dioxan-2-one D-0-11549

Trimethylene carbonate

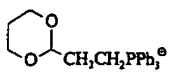
[2453-03-4]



$C_4H_6O_3$ M 102.0
Needles. Mp 47-48°. Bp_4 135°. Readily reversibly polymerizes to a glass.

Carothers, W.H. *et al*, *J.A.C.S.*, 1930, 52, 314 (*synth, cryst struct*)
Baba, A. *et al*, *Tet. Lett.*, 1985, 26, 1323 (*synth*)

[2-(1,3-Dioxan-2-yl)ethyl] triphenylphosphonium(1+), 9CI D-0-11550



$C_{24}H_{25}O_2P^{\oplus}$ M 377.4 (ion)

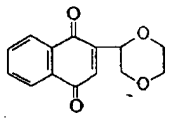
Bromide: [69891-92-5].
$C_{24}H_{26}BrO_2P$ M 457.3 With RLi → ylide. Solid. Mp 205-208°.

Ylide: [69891-57-2]. [2-(*1,3-Dioxan-2-yl*)*ethylidene*]*triphenylphosphorane*
$C_{24}H_{25}O_2P$ M 376.4 Wittig rgt., for chain extension of aldehydes and ketones. Used in leukotriene synth. Orange.

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 2, 1674B (*nmr*)
Aldrich Library of FT-IR Spectra, 1st edn., 2, 547C (*ir*)
Stowell, J.C. *et al*, *Synthesis*, 1979, 132 (*synth, use*)
Cohen, N. *et al*, *J.A.C.S.*, 1983, 105, 3661 (*use*)

2-(1,4-Dioxan-2-yl)-1,4-naphthoquinone D-0-11551

[24161-37-3]



$C_{14}H_{12}O_4$ M 244.2

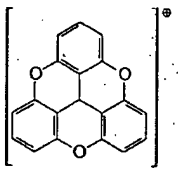
(±)-*form*
Yellow cryst. (Et_2O). Mp 133-136° dec.

Piek, H., *Tet. Lett.*, 1969, 1169 (*synth, ir, ms, uv, pmr*)

8,12-Dioxa-4-oxoniadibenzo[*cd,mn*]pyrene(1+), 10CI D-0-11552

12cH-4,8,12-Trioxadibenzo[cd,mn]*pyren-12c-ylium*(1+), *9CI. Sesquixanthylium*

[25501-79-5]



$C_{19}H_9O_3^{\oplus}$ M 285.2 (ion)
CAS names this ion in two ways with different reg. nos. Stable planar ion.

Chloride:
$C_{19}H_9ClO_3$ M 320.7 Yellow cryst. Mp 350°.

Chloride, dihydrate: Orange needles ($EtOH/Et_2O$). Mod. sol. H_2O, EtOH, Me_2CO; insol. Et_2O, C_6H_6. Mp > 350°. Ionised in H_2O.

[64524-68-1, 138259-50-4]

Martin, J.C. *et al*, *J.A.C.S.*, 1964, 86, 2252 (*synth, uv, props*)
Lofthagen, M. *et al*, *J.O.C.*, 1992, 57, 61.

NAMES, SYNONYMS, AND STRUCTURES OF ORGANIC COMPOUNDS

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VOLUME I
CAS Number
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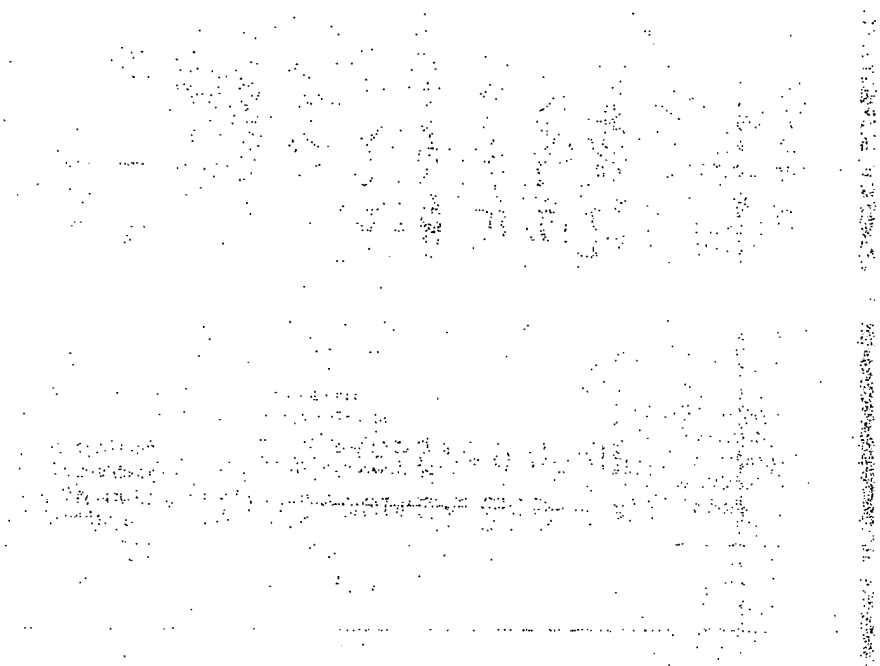

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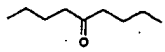
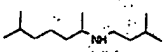
Palmitin, 1,3-di-

4710
CAS RN: 502-56-7
Name: 5-Nonanone
MF: $C_9H_{18}O$



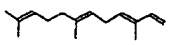
Synonyms:
Butyl ketone
Dibutyl ketone

4711
CAS RN: 502-59-0
Name: 2-Heptanamine, 6-methyl-*N*-(3-methylbutyl)-
MF: $C_{13}H_{29}N$



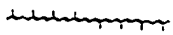
Synonyms:
N-(1,5-Dimethylhexyl)isopentylamine
Hexylamine, *N*-isopentyl-1,5-dimethyl-
2-Isoamylamino-6-methylheptane
N-Isoamyl-1,5-dimethylhexylamine
N-Isopentyl-1,5-dimethylhexylamine
Ludoctal
2-Methyl-6-(3-methylbutylamino)heptane
Neo-octon
Octamylamine
Octin D
Octinum D
Octisamyl
Octometine
Oktin D

4712
CAS RN: 502-61-4
Name: 1,3,6,10-Dodecatetraene, 3,7,11-trimethyl-, (*E,E*)-
MF: $C_{15}H_{24}$



Synonyms:
(*E,E*)-α-Farnesene
α-*trans*-*trans*-Farnesene
α-Farnesene
trans-α-Farnesene
trans,trans-α-Farnesene
Farnesene
trans-3,7,11-Trimethyl-1,3,6,10-dodecatetraene
trans-2,6,10-Trimethyl-2,6,9,11-dodecatetraene

4713
CAS RN: 502-65-8
Name: ψ,ψ-Carotene
MF: $C_{40}H_{56}$

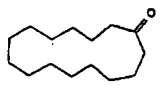


Synonyms:
C.I. 75125
2,6,8,10,12,14,16,18,20,22,24,26,30-Dotriacontatridecaene, 2,6,10,14,19,23,27,31-octamethyl-, (all-E)-
Lycopene 7
trans-Lycopene
all-*trans*-Lycopene
Lycopene
Lycopene, all-*trans*-
(all-E)-2,6,10,14,19,23,27,31-Octamethyl-2,6,8,10,12,14,16,18,20,22,24,26,30-dotriacontatridecaene

4714
CAS RN: 502-71-6
Name: Octadecanoic acid, 6-oxo-
MF: $C_{18}H_{34}O_3$

Synonyms:
Lactarinic acid
Octadecanoic acid, 6-keto
6-Oxooctadecanoic acid

4715
CAS RN: 502-72-7
Name: Cyclopentadecanone
MF: $C_{15}H_{28}O$



Synonyms:
Exaltone
Normuscon
Normuscone

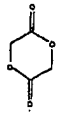
4716
CAS RN: 502-73-8
Name: 16-Hentriacontanone
MF: $C_{31}H_{62}O$

Synonyms:
Dipentadecyl ketone
Palmitone
Pentadecyl ketone

4717
CAS RN: 502-75-0
Name: Hexadecanoic acid, 11-hydroxy-
MF: $C_{16}H_{32}O_3$

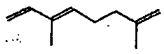
Synonyms:
11-Hydroxyhexadecanoic acid
Jalapinolic acid

4718
CAS RN: 502-97-6
Name: 1,4-Dioxane-2,5-dione
MF: $C_4H_4O_4$



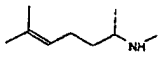
Synonyms:
Acetic acid, hydroxy-, bimol. cyclic ester
Diglycolide
p-Dioxane-2,5-dione
Glycolide
Glycollide

4719
CAS RN: 502-99-8
Name: 1,3,7-Octatriene, 3,7-dimethyl-
MF: $C_{10}H_{16}$



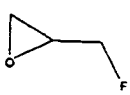
Synonyms:
3,7-Dimethyl-1,3,7-octatriene
2,6-Dimethyl-1,5,7-octatriene
α-Ocimene
Ocimene

4720
CAS RN: 503-01-5
Name: 5-Hepten-2-amine, *N*,6-dimethyl-
MF: $C_9H_{19}N$



Synonyms:
2-Heptene, 2-methyl-6-methylamino
4-Hexenylamine, *N*,1,5-trimethyl-
Isomethepten
Isomethептene
Isonyl
6-Methylamino-2-methylheptene
Octanil
Octin
Octine
Octinum
Octon

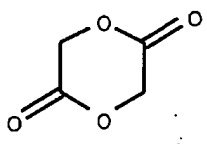
4721
CAS RN: 503-09-3
Name: Oxirane, (fluoromethyl)-
MF: C_3H_5FO



Synonyms:
Epifluorohydrin
1,2-Epoxy-3-fluoropropane
(Fluoromethyl)oxirane
3-Fluoropropene-1,2-oxide

Answer 1:

Registry Number: 502-97-6



Formula: C4 H4 O4

CA Index Name: 1,4-Dioxane-2,5-dione

Other Names: Glycolide (6CI,7CI); p-Dioxane-2,5-dione (8CI); Acetic acid, hydroxy-, bimol. cyclic ester; Diglycolide; Glycolide S; Glycollide; NSC 403079

-- Resources --

References: ~377

STN Files: CAPLUS, AGRICOLA, BEILSTEIN, BIOSIS, BIOTECHNO, CA, CAOLD, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM, EMBASE, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(Additional Information is available through STN International. Contact your information specialist, a local CAS representative, or the CAS Help Desk for Assistance)

Deleted Registry Number(s): 162682-01-1

Database: REGISTRY (Copyright (C) 2008 ACS)

Additional Information:
3D Model
Commercial Sources
Regulated Chemicals Listing
Reaction Information

Substance Identifier task started on Thu Mar 20, 2008 at 11:38 AM

Explored by Substance Identifier in REGISTRY.

REGISTRY Answers

1 for glycolide

Answer 1:

Accession Number: 74601 CHEMLIST

CAS Registry Number: 502-97-6

Chemical Name
1,4-Dioxane-2,5-dione (English, French) (TSCA, NDSL, EINECS, ENCS, ECL, ASIA-PAC)
1,4-dioxanne-2,5-dione (French) (EINECS)
1,4-Dioxan-2,5-dion (German) (EINECS)
1,4-dioxano-2,5-diona (Spanish) (EINECS)
Acetic acid, hydroxy-, bimol. cyclic ester
Diglycolide
Glycolide
Glycolide S
Glycollide
NSC 403079
p-Dioxane-2,5-dione

File Segment
ASIA-PACIFIC: ASIA-PAC; CANADA: NDSL; EEC: EINECS; JAPAN: ENCS; KOREA: ECL; USA: TSCA

Confidentiality Status
Public

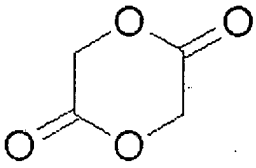
Regulatory List Number
EINECS No.: 207-954-9
ENCS No.: 5-6815; 5-6865
ECL Serial No.: 2000-3-1401

Inventory Status
On TSCA Inventory
January 2008 TSCA Inventory
EPA Flags:
P Commenced PMN
On NDSL
Canada Gazette, Part I, January 31, 1998
On EINECS
Annex to Official Journal of the European Communities, 15 June 1990
On ENCS
Japanese Gazette, December 13, 2004; June 22, 2005
Contained within class: Low Molecular Heterocyclic Organic Compounds.
On ECL
Korean Government Gazette Notice, 2000
On ASIA-PAC

Database: CHEMLIST (COPYRIGHT (C) 2008 ACS)

G1796 Glycolide

Sigma >99% NEW



Synonym	1,4-Dioxane-2,5-dione
Molecular Formula	$C_4H_4O_4$
Molecular Weight	116.07
CAS Number	502-97-6
MDL number	MFCD00081108
EG/EC Number	207-954-9

Expand/Collapse All

Price and Availability

Click For Pricing and Availability

Properties

assay	>99%
mp	82-86(lit.)

Safety

Hazard Codes	Xn
Risk Statements	22-36
Safety Statements	26
WGK Germany	3

Bio Invigor **Product Specification**

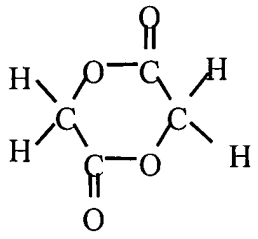
VigorSorb® GLY

GLY-S-001-1

Revision Date : Jun 25, 2007

I. Identification

Product Number	GLY
Common Name	Glycolide
Chemical Formula	$C_4H_4O_4$
Chemical name	1,4-dioxane-2,5-dione
CAS Registry Number	502-97-6
Chemical Structure	



Glycolide

II. Specification

Appearance	White crystalline solid	
Assay	> 99.5 (%)	Acid-base titration
Melting Range	82-86℃	DSC(10℃/min)
Free acid	≤ 5 meq/kg	Acid-base titration
Water Content	≤ 0.03 (%)	Karl-Fischer titration
Residual Solvent	≤ 0.1 (%)	Gas Chromatography
Heavy Metal	≤ 10 (ppm)	Inductively Coupled Plasma

Bio Invigor Co: http://www.bio-invigor.com **Email:** bio.invigor@msa.hinet.net
5F, No.176, Xing-Ai Rd., Nei-Hu District, Taipei 114, Taiwan, R.O.C. Tel : +886-2-2796.8338 ; Fax : +886-2-2790.4337

Library and Database Assignments for

Undergraduate Chemistry Majors

Ann Bolek
The University of Akron

Abstract

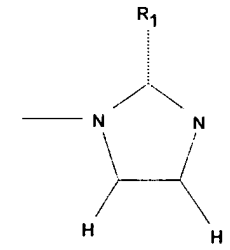
At The University of Akron, undergraduate chemistry majors are given library and database assignments during their junior year in their Advanced Chemistry Laboratory classes. During the first semester, they are assigned searches in ,

Abstract (continued)

whereas during the second semester, they are assigned searches in and , the , the , various , and . This poster will list the sources used and provide examples of some of the searches assigned.

SciFinder Scholar Searches

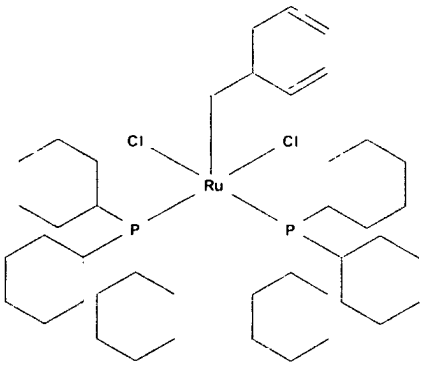
- Asked to provide the total number of references
- Asked to limit the references to "uses"



R1 = Ru, Ag

SciFinder Scholar Searches

- List commercial sources
- Click on microscope
  - For whom is compound named?
  - How is it used?



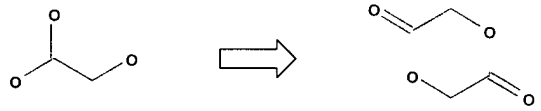
SciFinder Scholar Searches

- List registry numbers retrieved
- Provide the following for one " " reference
  -
  -
  -
  -
  -
  -

SciFinder Scholar Searches

- on various ways to find preparations and properties

  on reaction of glycolic acid to form glycolide



  Search "glycolide" as a and click on the A→B button.

  Click on the for glycolide and list one and one

SciFinder Scholar Searches

- (continued)

  After searching for glycolide as a substance identifier, click on "Get References" and limit the search to **references associated with:**

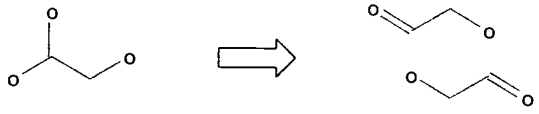
  Search the " " as a **research topic**. Disadvantages of searching in this manner are explained.

Web of Science

- Availability of an abstract
  Number of cited references
  Number of times cited
  Availability in library or on the Web
- on University of Akron faculty
- on specific paper

CrossFire Searches

- Structure search in for the reaction of glycolic acid to form glycolide



- Molecular formula search in for
- Registry number search in for ( ) and various types of

Cambridge Structural Database

- Search by structure and print out results for closest match

Printed Reference Books

- Chemical Abstracts Service Source Index ( )
- Dictionary of Organic/Inorganic Compounds
- Spectra ( )
- Organic Syntheses
- Inorganic Syntheses

Web Resources

- Toxnet
- Integrated Spectral Data Base for Organic Compounds
- NIST Chemistry WebBook
- Organic Syntheses